

**Notice of Allowability**

Application No.

10/664,661

Examiner

Walter Benson

Applicant(s)

GENSLER, WILLIAM G.

Art Unit

2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to IDS filed 9/20/03.
2. ☒ The allowed claim(s) is/are 1-3.
3. ☒ The drawings filed on 20 September 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 9/20/03
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

Walter Benson 571-272-2227

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Mr. William G. Gensler, Inventor on 12/15/04.

3. Claims filed 9/20/03 are amended as follows:

1. A method for measuring the water content within a plant comprising the steps of:

placing a sensor ~~surface~~ electrode in any gravitation orientation implanted within said plant,

placing a second electrode in ~~the~~ a root environment,

measuring the area of said sensor ~~surface~~ electrode implanted within said plant,

measuring the electrical capacitance between a first wire connected to said sensor ~~surface~~ electrode and a second wire connected to said second electrode in said root environment,

forming ~~the~~ a ratio of said electrical capacitance to said area of said electrode surface for determining water content.

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2. Apparatus for measuring the water content within a plant comprising:

sensor ~~surface~~ electrode means for ~~making contact~~ implanting within said plant,  
second electrode ~~means~~ for making contact with the a root environment,  
first wire ~~means~~ connected to said sensor ~~surface~~ electrode, second wire ~~means~~ connected  
to said second electrode ~~means~~,  
means coupled to said first wire ~~means~~ and said second wire ~~means~~ for measuring the  
electrical capacitance generated therebetween by said plant  $\tau$ ,  
area means for measuring area of said sensor ~~surface~~ electrode implanted within said  
plant  $\tau$ ,  
means for determining water content by forming a ratio of said electrical capacitance to  
said area of said electrode surface.

3. Apparatus as recited in claim 2 further including a plurality of sensor ~~surface~~ electrode means  
and means interposed between each of said sensor ~~surface~~ electrodes and said measuring  
means for selectively connecting each one of the said sensor ~~surface~~ electrodes to said  
measuring means.

*Allowable Subject Matter*

4. Claims 1-3 are allowed.

The prior art of record fails to teach in combination as claimed a system for measuring water  
content within a plant including a sensor electrode for implanting within the plant. A second

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electrode that makes contact with a root environment. Measuring the area of the sensor electrode implanted within the plant. Forming a ratio of the electrical capacitance to the area of the electrode surface for determining water content.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter Benson whose telephone number is (571) 272-2227. The examiner can normally be reached on Mon to Fri 6:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on (571) 272-2233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Walter Benson *WB*  
Patent Examiner

December 15, 2004

*N. Le*  
**N. Le**  
**Supervisory Patent Examiner**  
**Technology Center 2800**